

**REMARKS**

Claims 10, 12, 14-17, 24, 25, 29, and 30-42 are pending. Claims 10, 12, and 17 are allowed. Applicant acknowledges the indication of allowable subject matter with appreciation.

In the Office Action mailed March 13, 2006, claim 30 was objected to as including typographical informalities. Claim 30 has been amended to address the Examiner's concerns. Applicant thus believes that claim 30 is also in condition for allowance.

Claim 25 was rejected under 35 U.S.C. § 112, second paragraph as indefinite. Claim 25 has been amended to address the Examiner's concerns. Applicant thus believes that claim 25 is also in condition for allowance.

Claims 14-16 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Publication No. 2003/0072079A1 to Silverstein et al. (hereinafter "Silverstein").

The rejections of claims 14-16 contend that intense illumination, which leads to the thermal loading of Silverstein's beamsplitter 340, forms "a stress modulator" as recited in claims 14-16. Applicant respectfully disagrees. In particular, Silverstein himself acknowledges that thermal loading is undesirable and it seems self-evident that intense

light in a lithography system is not "configured to" apply stress as recited in claim 14-16.

Moreover, claims 14-16 have each been amended to recite that the mechanical stress modulator is the stress modulator to apply normal stress on a curved surface of a polarization modulator. Applicant submits that Silverstein's intense illumination is will not apply stress in this fashion.

Further, please note that claims 14-16 have each been amended to recite "a lithography system" in the body of the claim. Applicant respectfully suggests that the recitation, as recited, must be given patentable weight.

Accordingly, claims 14-16 are not anticipated by Silverstein. Applicant thus respectfully requests that the rejections of claims 14-16 be withdrawn.

Claim 24 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,885,782 to Wood et al. (hereinafter "Wood").

Claim 24 relates to a method of modifying the polarization of light. The method includes applying stress to a polarization modulator, receiving light of a first polarization state in the polarization modulator, modifying the polarization of light within the polarization modulator, detecting a parameter related to one or more characteristics of the light, transmitting light

of a second polarization state different than the first polarization state from the polarization modulator, and forming a pattern on a substrate using the transmitted light. The parameter is related to the second polarization state.

Wood neither describes nor suggests elements and/or limitations recited in claim 24. For example, Wood neither describes nor suggests forming a pattern on a substrate using the transmitted light.

In this regard, Wood describes optical fibers and "applications relating to fiber-optic test and measurement." See *Wood*, col. 1, line 11-12. There is nothing to suggest that such optical fibers are used or even can be used to form patterns on a substrate, as recited in claim 24.

Accordingly, claim 24 is not anticipated by Silverstein. Applicant thus respectfully requests that the rejection of claim 24 be withdrawn.

Claim 29 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,633,959 to Niki et al. (hereinafter "Niki").

Claim 29 relates to an apparatus. The apparatus includes a component of a lithography system. The component includes a polarization modulator configured to polarize light transmitted therethrough from a first polarization profile to a second

polarization profile different than the first polarization profile, a stress modulator in communication with the polarization modulator, a controller configured to receive a signal based on a parameter related to one or more characteristics of the transmitted light, and a light sensor positioned to receive at least a portion of the transmitted light.

The stress modulator is to apply normal stress on a curved surface of the polarization modulator to induce birefringence and to change the polarization of light transmitted through the polarization modulator. The controller is in communication with the stress modulator and configured to control the stress. The light sensor is in communication with the controller. The signal based on the parameter is a signal from the light sensor. The parameter is based on the second different polarization profile.

Niki neither describes nor suggests a stress modulator that is to apply normal stress on a curved surface of the polarization modulator to induce birefringence and to change the polarization of light transmitted through the polarization modulator, as recited in claim 29.

In this regard, Niki describes that one or more polarization plane changing parts 30 can be connected in series with two or more optical fibers. See, e.g., *Niki*, col. 6, line 64-66. These optical fibers can be wound in a coil around a piezoelectric cylinder 41. See, e.g., *Niki*, col. 8, line 55-61. When the cylinder distorts, so does the coiled optical fiber. See, e.g., *Niki*, col. 8, line 56-58. In particular, the phase difference  $\delta$  in the optical fiber is changed and, concomitantly, the polarization state of light transmitted through the assembly of the optical fibers and polarization plane changing part 30 is changed. See, e.g., *Niki*, col. 8, line 61- col. 9, line 6. The impact of the phase difference  $\delta$  on the polarization of light is discussed, e.g., at *Niki*, col. 7, line 11-59.

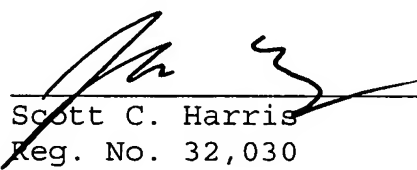
Applicant submits Niki's changing of the phase difference  $\delta$  neither describes nor suggests the induction of birefringence, as recited in claim 29. In particular, it appears that a physical mechanism other than birefringence is used to change the polarization of light in Niki's device.

Accordingly, claim 29 is not anticipated by Niki. Applicant thus respectfully requests that the rejection of claim 29 be withdrawn.

Applicant therefore asks that all claims be allowed. No fees are believed due at this time. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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